REMARKS

The Office Action and the cited and applied references have been carefully reviewed. No claim is allowed. Claims 41-48 presently appear in this application and define patentable subject matter warranting their allowance. Reconsideration and allowance are hereby respectfully requested.

Claims 41-48 have been rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. The examiner states that, in view of applicant's definition of the term "derivatives", the GILR proteins of the instant invention encompass a broad genus of molecules including modified analogs or fragments of the GILR proteins of the present invention that are not adequately described by applicant's disclosure. The examiner asserts that one of skill in the art would not be able to immediately envision the structures of the full scope of compounds encompassed by the claimed genus, and therefore, applicant was not in possession of the full scope of the claimed GILR protein derivative according to the present invention. This rejection is respectfully traversed.

Applicant believes that this rejection is partly obviated by the amendment to the claims to delete the term "derivatives" and to delete the recitation of "a cDNA sequence, derived from the coding region of" in claim 41.

The present specification discloses the isolation of human GILR by using mouse GILR cDNA (SEQ ID NO:1) as a probe against a human cDNA library (section (r) at page 57 and section (g) at page 64). The cDNA sequence and encoded amino acid sequence of human GILR are presented in Fig. 13 as SEQ ID NO:5 and 6, respectively. The cDNA sequence and encoded amino acid sequence of the mouse GILR homologue are presented in Fig. 2 as SEQ ID NOs:1 and 2, respectively.

The present specification at page 64, lines 20-22, further discloses that human GILR has 86% sequence identity with mouse GILR at the DNA level (as shown in Fig. 14) and 94% sequence identity at the protein level (as shown in Fig. 15). Based on the high level of sequence identity overall and a description of where sequences are conserved, as shown in Figs. 14 and 15, there is a "clear nexus relationship" between the sequence, i.e., conserved regions, and the functional limitations. This nexus is further provided by the experimental data generated using mouse GILR to obtain human GILR as disclosed on pages 58-64 of the specification. Accordingly, applicant submits that the subject matter

presently claimed was adequately described in the instant specification.

Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Claims 43-44 and 47-48 have been rejected under 35 U.S.C. §102(b) as being anticipated by Shibanuma et al. and Jay et al. The examiner states that Shibanuma discloses the mouse TSC-22 leucine zipper containing protein, which has 143 amino acids and comprises 89 identical residues of the GILR protein according to SEQ ID NO:2 of the instant application, and therefore asserts that Shibanuma discloses a protein comprising at least part of a protein comprising at least part of a protein according to SEQ ID NO:2. The examiner further states that Jay discloses the human TS-22 leucine zipper containing protein, which comprises a sequence that is 70% identical to the polypeptide according to SEQ ID NO:2, and therefore the polypeptide of Jay comprises at least part of the GILR proteins of the instant application.

This rejection is obviated by the amendments to rejected claims 43-44 and 47-48 to replace the recitation of "derivative" with "chemically modified GILR" as fully supported by the specification as originally filed. The proteins of Shibanuma and Jay cannot anticipate a chemically modified GILD protein of the present invention.

Reconsideration and withdrawal of the rejection are therefore respectfully requested.

In view of the above, the claims comply with 35 U.S.C. §112 and define patentable subject matter warranting their allowance. Favorable consideration and early allowance are earnestly urged.

Respectfully submitted,

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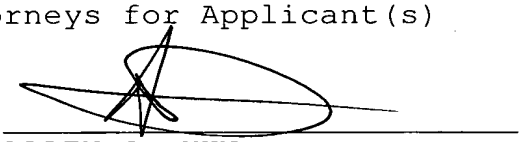
By 

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VERSION WITH MARKING TO SHOW CHANGES MADE

Claims 41, 43, 44, 47, and 48 have been amended as follows:

41(Amended). A GILR protein encoded by the nucleotide sequence of SEQ ID NO:1 or by a nucleotide sequence capable of hybridizing with ~~a cDNA sequence, derived from the coding region of~~ SEQ ID NO:1, under stringent conditions, wherein said GILR protein is capable of inhibiting apoptosis and stimulating lymphocyte activity.

43(Amended). A ~~derivative of the~~ GILR protein of claim 42, wherein said GILR protein is chemically modified by being conjugated or complexed with molecules facilitating or enhancing the transport of said GILR protein across the cell membrane and wherein the ~~derivative~~ chemically modified GILR protein has the same or higher biological activity as said GILR protein.

44(Amended). A pharmaceutical composition for the inhibition of apoptosis in cells or for stimulating lymphocyte activation, comprising, as an active ingredient, the ~~derivative~~ chemically modified GILR protein of claim 43.

47(Amended). A ~~derivative of the~~ GILR protein of claim 41, wherein said GILR protein is chemically modified by being conjugated or complexed with molecules facilitating or enhancing the transport of said GILR protein across cell membrane and wherein the ~~derivative~~ chemically modified GILR protein has the same or higher biological activity as said GILR protein.

48(Amended). A pharmaceutical composition for the inhibition of apoptosis in cells or for stimulating lymphocyte activation, comprising, as an active ingredient, the ~~derivative~~ chemically modified GILR protein of claim 47.